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COMMISSION ON SECURITY AND  
COOPERATION IN EUROPE

# Congress of the United States

House of Representatives  
Washington, DC 20515-2107

April 5, 1999

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Shirley Ann Jackson  
Chairman  
Nuclear Regulatory Commission  
Washington, DC 20555

Dear Ms. Jackson:

This letter is a followup to my March 10, 1999 letter to you regarding the Nuclear Regulatory Commission's (NRC's) oversight of nuclear plants' response to the "Y2K" bug. Although I realize you have not had time to prepare a detailed response to that letter, I think it important to highlight the issue of emergency diesel generator (EDG) reliability in light of a recent discovery at the Seabrook nuclear power plant in New Hampshire.

In the March 10, 1999 letter I pointed out that, "Y2K problems in electricity grids that provide outside power would force plant shutdowns and force plants to rely on backup diesel generators to keep coolant flowing around the fuel rods in the reactor and in the spent fuel pools. At least 46 generator problems were reported by NRC licensees in 1997-1998." In response to such concerns an Associated Press wire story on March 10, 1999 described Seabrook Station spokesman David Barr's reassurance about the power backup: "Barr said Seabrook tests its two back-up diesel generators, each the size of a school bus, about once a month. He said they have never failed."

So I find it rather interesting and disturbing that one of the two backup diesel generators at Seabrook likely was inoperable at that time. According to a March 31, 1999 Daily Event Report (DER 35535) from Seabrook's owner to the NRC, the "B" Train Emergency Diesel Generator may not have been operable during portions or all of the previous operating cycle due to a defective AR relay." The DER states that one AR relay "would have prevented the EDG from powering the emergency bus." A second AR relay "was incapable of starting a Containment Building Spray (CBS) pump." The relay failures apparently could have occurred at any time since they were replaced during the last refueling outage, which ended in June 1997. Indeed, it is quite possible that this backup generator has not been operable for the last twenty-one months.

The DER also notes that "it is possible that there were times when the A Train EDG was inoperable for maintenance or testing concurrent with the B Train EDG being inoperable." *At such times the plant would have had no backup power source.* Had there been a blackout of offsite power (which fortunately did not occur), and had the problem not been corrected, there could have been a meltdown within hours.

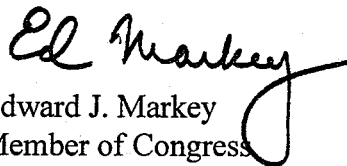
I believe this incident highlights the potential threat to nuclear power plants from power blackouts due to Y2K problems with the electricity grid. It also highlights an apparent lack of attention from nuclear utilities to problems with the backup generators that are supposed to prevent such blackouts from causing meltdowns. I would like to reaffirm the second recommendation I made in the March 10 letter: "The NRC should include backup diesel generator reliability in Y2K inspections and in periodic Y2K reports, require all licensees to have *all* backup electricity sources available at the turn of the year and other key Y2K dates, and ensure adequate fuel supply."

In addition, I request your assistance in answering the following questions:

1. If Seabrook tests its generators once a month, why did they not discover the generator was inoperable until the refueling outage? Does the NRC need to require licensees to test not only that the generators work but also that they are able to provide emergency power to the plants?
2. On what dates since June 1997 is it possible that neither of the two generators were operable at Seabrook, and hence that the plant had access to no backup power?
3. Please inform me of the results of the licensee's ongoing investigations into the failure of the B Train relays and into "the potential for similar issues with the A Train AR relays."

Thank you for your assistance. If you have questions concerning this letter please feel free to contact Mr. Lowell Ungar or Mr. Jeffrey Duncan on my staff at (202)225-2836.

Sincerely,

  
Edward J. Markey  
Member of Congress

**EXPAND STORY**

**AM-MA--Seabrook-Y2K,0435**

Seabrook, Regulatory Commission say plants will be ready for 2000 Eds: Of regional interest; Mass. angle in 2nd graf.

SEABROOK, N.H. (AP) \_ Seabrook power plant officials and the U.S. Nuclear Regulatory Commission say the industry and its computerized functions will be ready when the millennium rolls around.

The statements came in response to a Massachusetts congressman's warning that all nuclear plants should be inspected to avoid blackouts, computer shutdowns and back-up generator failures that could result from the year 2000 computer glitch, also known as "Y2K."

Many older computers and computer chips only recognize the last two digits in years and assume the first two are 19, so experts fear that when 1999 turns to 2000, such computers will read the date as 1900 and fail to function properly.

"If nuclear power plants have to shut down, or 'scram,' we may all have to scramble as unaudited emergency backup systems try to shoulder the load" of providing electric power, Massachusetts Democrat Edward Markey said Tuesday at a Washington symposium on Y2K nuclear issues.

Seabrook is one of 13 nuclear plants audited by the regulatory commission for Y2K readiness. Three years ago, the plant began looking at 1,300 systems that could be affected and found 13 potentially serious problems. Most of the problems concerned the plant's business, not its operation.

All of the country's 103 nuclear plants should undergo similar inspections, Markey said.

Commission spokesman Neil Sheehan disagreed, saying the industry is on top of the problem and all plants will be monitored by in-house inspectors this spring, at the request of Congress. The commission will train the inspectors, he said.

"We would disagree that so many problems were found that we needed to extend the audits. Initially we decided to look at a dozen plants of different types and ages to get an overview of where the industry stood," Sheehan said.

Seabrook, the largest energy plant in New England, is on schedule to fix its problems by July and, even if it weren't, poses no danger, said plant spokesman David Barr. About 1,000 people work at the plant, which provides about 5 percent of New England's energy \_ enough to run 1 million homes.

[ Barr said Markey based his comments on outdated information. The plant will shut down for six weeks at the end of this month and officials will examine the problem completely, Barr said.

[ Barr said Seabrook tests its two back-up diesel generators, each the size of a school bus, about once a month. He said they have never failed.

AP-ES-03-10-99 1305EST

:SUBJECT: MA

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Received by NewsEdge Insight: 03/10/1999 13:05:00

Power Reactor

Event Number: 35535

FACILITY: SEABROOK	REGION: 1	NOTIFICATION DATE: 03/31/1999
UNIT: [1] [] []	STATE: NH	NOTIFICATION TIME: 13:07[EST]
RXTYPE: [1] W-4-LP		EVENT DATE: 03/31/1999

NRC NOTIFIED BY: KILBY	EVENT TIME: 11:00[EST]
HQ OPS OFFICER: JOHN MacKINNON	LAST UPDATE DATE: 03/31/1999

EMERGENCY CLASS:	PERSON	ORGANIZATION
10 CFR SECTION:	KATHLEEN MODES	R1
AINA 50.72(b)(2)(iii)(A) POT UNABLE TO SAFE SD		

UNIT	SCRAM CODE	RX CRIT	INIT PWR	INIT RX MODE	CURR PWR	CURR RX MODE
1	N	N	0	Cold Shutdown	0	Cold Shutdown

## EVENT TEXT

"B" Train Emergency Diesel Generator may not have been operable during portions or all of the previous operating cycle due to a defective AR relay.

"On March 31, 1999 at 1100, during the current refueling outage, North Atlantic Energy Service Corporation (North Atlantic) determined that the B Train Emergency Diesel Generator (EDG) may not have been operable during portions or all of the previous operating cycle. Specifically, during 18 month EDG testing on March 29, 1999, it was determined that an AR relay associated with the B Train EDG Emergency Power Sequencer (EPS) was incapable of opening the breaker to the Unit Auxiliary Transformer (UAT). This would have prevented the EDG from powering the emergency bus if called upon to do so.

"Additional testing on March 30, 1999, revealed that another AR relay associated with the B Train EDG EPS was incapable of starting a Containment Building Spray (CBS) pump. This would have prevented the B Train CBS pump from automatically starting if called upon to do so.

"North Atlantic is currently investigating this issue and has not been able to determine the definitive cause of the relay failures or when the failures occurred, however, the B Train AR relays were replaced during the last refueling outage which was completed in June 1997. The B Train EDG successfully passed its surveillance testing during that outage after the relays were replaced. North Atlantic is currently investigating the potential for similar issues with the A Train AR relays.

"North Atlantic has concluded that during the prior operating cycle, it is possible that there were times when the A Train EDG was inoperable for maintenance or testing concurrent with the B Train EDG being inoperable due to the aforementioned AR relay failures. This constitutes a condition that alone could have prevented the fulfillment of the safety function of structures, systems, or components that are needed to mitigate the consequences of an accident and is reportable pursuant to 10 CFR 50.72(b)(2)(iii). Notwithstanding, the potential unavailability of the B EDG, during the past operating cycle offsite power was available. The AR relays in the B Train EDG EPS have been replaced and EDG testing has been satisfactorily completed."

The NRC Resident Inspector was notified of this event by the licensee.